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BOOKS for computer professionals

from the
IEEE Computer Society

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TUTORIALS just out

Designing with Microprocessors — 150 pp.

This unique tutorial, given by Professor Tilak Agerwala of the University of Texas, Gerald Masson of Johns Hopkins, and Roger Westgate of Johns Hopkins at COMPCON Fall 76, deals with the principles and practice of microprocessor design. Covers such topics as chip architecture, microprocessor selection criteria, software aids, development systems, microprocessor applications, networks, bussing strategies, and distributed intelligence.

Nonmembers — \$10.00

IEEE members — \$7.50

Software Design Techniques — 282 pp.

Intended for both beginning and experienced software designers, this book contains 18 key papers plus over 100 pages of original material by the editors, Professors Peter Freeman of U. C. Irvine and Anthony I. Wasserman of U. C. San Francisco. Major subject categories covered include the importance of design and specification, differences between design and programming, basic design techniques (abstractions, representation, structure diagrams, metacode). Also includes a series of revealing case studies.

Nonmembers — \$12.00

IEEE members — \$9.00

AFIPS Press Information Technology Series, Vol. I — Database Management Systems — 133 pp.

The AFIPS Information Technology brings together in specialized volumes the most valuable papers from past NCC's. Under the direction of series editor Jack Sherman of Lockheed/Sunnyvale, the large number of papers and wide variety of topics covered in the conference proceedings will be conveniently grouped and readily available.

This first volume, just published by AFIPS Press, contains 16 papers on database management systems. Editor Ben Shneiderman of the University of Maryland provides excellent introductions to the areas covered: management and utilization perspectives, implementation and design of database management systems, query languages, security, integrity, privacy and concurrency, and specification, simulation, and translation of database systems.

Nonmembers — \$15.00

IEEE members — \$11.25

Computer Networks (revised 1976) — 296 pp.

This most recent revision of the IEEE Computer Society's most popular tutorial covers the areas of network topology and communications media, network technology and its effect on network performance, resource sharing requirements and techniques, and new approaches to network performance measurement, access, and management. Editors Marshall Abrams, Robert P. Blanc, and Ira W. Cotton of the National Bureau of Standards present concepts and terminology followed by specific examples. Presentation stresses breadth rather than depth, and as a result provides novices with a firm basis for becoming better educated on specific topics.

Price — \$12.00

CURRENT TUTORIALS

Management Auditing of Computer Operations — 480 pp.

All too frequently managers lose sight of the real impact a computer has on the entire operations of their organizations. The costs of acquiring, installing, and operating a computer represent only the tip of the iceberg. Managers must begin to more fully comprehend the influence the computer has on their ability to manage the whole organization. These tutorial notes and references are intended to help fill the continuing need for conducting management audits of computer operations.

Nonmember — \$16.00 Member — \$12.00

Structured Programming — 241 pp.

This tutorial includes an introduction to the major ideas of structured programming, and their theoretical and practical foundations; a detailed presentation of a major application program system, and a presentation of program development stressing the top-down evolutionary character of the process.

Nonmember — \$12.00 Member — \$9.00

Protection of Information in Computer Systems — 250 pp.

Covers the basic principles of information protection and explains the separation of addressing and protection, the capability system, the access-control list system, the protection of various types of objects, and protected objects and subsystems.

Nonmember — \$12.00 Member — \$9.00
Hardbound — \$15.50 Member — \$12.50

Minicomputers and Microprocessors — 271 pp.

Review of recent developments in both minicomputer and microprocessor technology. Each chapter begins with a short section which introduces the topics to be discussed and also highlights the significant points found in the chapter. Topic headings include technological advances, microprogramming, minicomputer architectures, microprocessors, mini and micro computer system development, and interfacing and peripherals.

Nonmember — \$12.00 Member — \$9.00

Microprogramming — 309 pp.

Text includes an introduction and overview plus 19 key papers on microprogramming in six general categories: introductory papers, microprogrammed architecture and languages, production of microprograms, emulation and direct execution, microprogram applications other than instruction execution, conclusions, and perspectives.

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Minicomputer Realtime Executives — 208 pp.

Of central importance to the economic realization of minicomputer applications is the realtime executive. Applications such as data acquisition, process control, and communication, are briefly discussed to identify their needs in a realtime executive. The main elements of these executives discussed include memory management, scheduling, data structuring, file handling, interprogram communication, and control structures.

Price — \$15.00



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NEW CONFERENCE PUBLICATIONS



Proceedings of the 3rd International Joint Conference on Pattern Recognition, Coronado, California, November 8-11, 1976 — 680 pp.

Contains over 150 papers on industrial applications, feature extractions and primitive selection, syntactic methods in pattern analysis, optical character recognition, learning algorithms and sample sizes, line drawing and waveform processing, interactive pattern analysis, statistical pattern recognition theory, perceptual modeling, clustering, linguistic applications and natural language processing, segmentation and shape encoding, medical image processing and pattern analysis, picture description and scene analysis, speech recognition, remote sensing, parallel processing and two-dimensional digital filtering, edge and object recognition, pattern recognition applications, image analysis and texture, and data base computer systems.

Nonmembers — \$25.00

Members — \$18.75



Proceedings of the 1976 Symposium on Computer-Aided Diagnosis of Medical Images, Coronado, California, November 11, 1976 — 100 pp.

This one-day symposium, held in conjunction with the Third International Joint Conference on Pattern Recognition, featured 16 papers on such topics as medical imaging from both the engineer's and the physician's viewpoint, recognition of vessel shadows, quantitative diagnosis of early pulmonary edema, picture processing of echocardiographic data, dynamic boundary surface detection, interactive graphics for lung volume determination, image processing for computer tomography, and studies on the utility of brain scanning.

Nonmembers — \$12.00

Members — \$9.00



Proceedings of the Second International Conference on Software Engineering, October 13-15, 1976 — 700 pp.

Topics covered in this proceedings include software requirements and specifications, program synthesis techniques, operating systems, education, performance evaluation, networks, design and development, programming languages, modeling, testing, tools, and case studies.

Nonmembers — \$20

Members — \$15



Digest of Papers from COMPCON 76 Fall: "Computers by the Millions for the Millions," September 7-10, 1976 — 350 pp.

Digest, from the IEEE Computer Society's own international conference, includes topics dealing with components, hardware and software, system design, and application, presented by many of the leading computer scientists and specialists in the world today.

Nonmembers — \$20

Members — \$15

ADDITIONAL CONFERENCE PUBLICATIONS

International Symposium on Technology for Selective Dissemination of Information, Sept. 8-10, 1976, Milan, Italy

Sponsored by the IEEE Computer Society's Technical Committee on Computer Communications, the symposium includes sessions on data networks, transmission technology, information systems, data management, user-oriented systems and interactive graphics, and applications in education and humanities.

Nonmembers — \$16

Members — \$12

Digest of the 1976 Joint Workshop on Pattern Recognition and Artificial Intelligence, June 1-3, 1976, Hyannis, Mass.

The workshop brings an interdisciplinary approach to selected topics in pattern recognition research — for example, the fundamental problem of procedures for finding good decision rules. New directions which are mutually beneficial to both automatic pattern recognition and artificial intelligence are explored and defined.

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Trends and Applications 1976: Micro and Mini Systems, May 27, 1976 — 142 pp.

Two parallel sessions — applications and systems, and language and miscellaneous — are featured. Papers present new research results and practical applications.

Nonmembers — \$8

Members — \$6

Proceedings of the Thirteenth Annual Design Automation Conference, June 28-30, 1976 — 501 pp.

The 13th conference organized to review current development and emphasis in computer-aided design (CAD). The conference is structured to meet the needs of developers of CAD techniques, the established users who provide the important feedback, and the people who are now entering the discipline of design automation. The conference offers the largest program of any previous design automation conference.

Nonmembers — \$20

Members — \$15

Ninth Annual Simulation Symposium, Record of Proceedings, March 17-19, 1976 — 375 pp.

This symposium provides a continuing forum for the interchange of ideas, techniques, and applications in the field of simulation. Typical sessions deal with simulation in biomedicine, aviation, and corporate management, as well as discussions of simulation languages.

Nonmembers — \$20

Members — \$15

Third Annual Symposium on Computer Architecture, January 19-21, 1976 — 202 pp.

The symposium covers the theory and practice of computer structures and digital system organization. Topics include architecture evolution, hardware descriptive languages, multi-microprocessors, performance evaluation and modeling, applications, hardware/software system considerations, resource sharing and process coordination, recent results, networks, architectures to support software concepts, architectural features for performance enhancement, and secondary storage.

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Call for Papers

IEEE Computer Society Conference on

PATTERN RECOGNITION AND IMAGE PROCESSING

sponsored by

IEEE Computer Society

Machine Intelligence and Pattern Analysis
Committee

June 6-8, 1977

Rensselaer Polytechnic Institute
Troy, NY 12181

Papers are invited on the following topics:

- statistical and syntactic pattern recognition
- clustering
- shape and texture recognition
- scene segmentation and structural analysis
- line, character, and speech recognition
- medical diagnosis and image processing
- industrial applications
- remote sensing applications
- image filtering, enhancing, and transform techniques

Papers should be submitted by November 30, 1976,
to the program chairman:

Professor Robert M. Haralick
Dept. of Electrical Engineering
University of Kansas
Lawrence, KS 66045
(913) 864-3434

The papers should describe original work that has not been previously published, should be typed, double-spaced on 8½ x 11" paper, and should include a 100-word abstract and set of key words. Authors will be notified concerning the acceptance of their paper by February 1, 1977.



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